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## DISHWASHER WITH A FAN CREASING OF FRESH AIR

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### Abstract

DISHWASHER, IN WHICH the FRESH AIR EAST HEATS TO DRY the DISH, INJECTS INTO the TANK OF the MACHINE AND REJETE IN the AMBIENT AIR AFTER EXTRACTION OF the STEAM.

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### Description

"Dishwasher provided with a driving back fan of the fresh air."

Present invention relates to a dishwasher provided with a driving back fan of the fresh air which is then heated by an appropriate apparatus, to dry the dish after, injected in the tank of the machine and rejected in the ambient air extraction of the steam.

In a of the same dishwasher kind, known from the German model of utility NO 71 10.279, the fresh air is heated, injected into the tank without being filtered and, the absorption of moisture, being after directed through a steam filter before joining the ambient air. This dishwasher does not give a result of fully satisfactory drying, bus, into sucking the fresh air, one drives back also dust in the tank.

One needs moreover for the steam filter a substantial capacity to prevent with effectiveness the steam outlet in the ambient air.

The invention consequently has as an object a dishwasher which allows an optimal drying all while charging the entourage only poorly of moist air.

This dishwasher is characterized by the fact that it comprises side inlet of the air a filter air, side of outlet an apparatus of condensation and a steam filter.

The advantage resides in the fact alder, in spite of operation with air outlet, on the one hand one uses, for the drying of the dish, the fresh air almost completely free of dust, on the other hand one releases in two steps the air of the moisture absorptive by him in the tank.

According to a provision of the elements used for the drying of the dish particularly beneficial have regard to the volume of which one lays out in the dishwasher, the air filter is grouped with the fan below the bottom of the tank, while the apparatus of condensation and the steam filter are placed between a lateral wall of the tank and the coating of the machine.

In an embodiment preferred of the invention, the inlet opening and the outlet opening of the air in the tank are placed above the level of the liquid, and about opposite one of the other, on the lateral walls. From where the double advantage of a good crossing scanning of the tank by hot air and suppressing of any penetration of liquid of rinsing in the openings.

The invention will be better included/understood using the detailed description of a taken embodiment like example nonrestrictive and illustrated schematically by the annexed drawing on which

- figure 1 is a view of face of the dishwasher; ferments open frontally, with indication of the flow of the hot air in the aforementioned tank

- figure 2 is a taken side view in direction of the arrow I, figure 1, in representing the lateral wall of straight as removed to make it possible to see the fan, placed under the tank,

- figure 3 is also a taken side view but in direction of arrow III, figure 1, without the lateral wall of left in order to letting see an apparatus of condensation and a steam filter in the upper region of the machine.

The domestic dishwasher indicated by the present reference 10 tanks in the shape of box 11 and one front door 12 hinged. Tank 11 contains two baskets 13 and 14 for the dish to be washed, not represented. In the program of rin cage, one sprinkles the dish of liquid appropriate poured in tank 11. The drying of the cleaned dish is carried out into fine program with free exhaust with heated fresh air.

As one sees it on figure 2, the fresh air is driven back by a fan 16 placed below bottom 15 of the tank and preceded by an air 17 filter intended to retain the dust.

This fan 16 is tracking of a conduit upright 18 provided with an apparatus of heating 19 for the aspirated fresh air. This conduit of hot air 18 extends between the lateral wall from straight tank and the front coating 21 from the machine, nonvisible on figure 2. By means of appropriate apparatuses of guidance of air starting from the

inlet opening 7 2 and under the terms of the air outlet opening 24 opposed to this one on the lateral wall from left 23 of the tank, one obtains, as represented on figure 1, an uniform scanning of the dish by hot air in the two baskets 13 and 14. The provision of the two openings 22 and 24 with half-value of tank 11 is used also for uniform guidance of the air in this one.

The remainders of liquid adhere, coming from previous washing, with the dish evaporate in consequence of the clean heat of this one and the injection of hot air in tank 11. This hot air absorbs moisture and flows by the outlet opening 24 to an apparatus of condensation 25 which extends between the lateral wall from left 23 from the tank and the corresponding coating 26 from the machine by forming a vertical conduit 27 directed upwards, open with its transverse upper part and internally provided with partitions 28 drawing a kind of labyrinth. In this apparatus of condensation 25, the major part of the moisture which the hot air contains precipitates and the condensate made return with tank 11 from dishwasher the 10 by the opening 24. Exiting hot air of the apparatus of condensation 25, with a low load of moisture remaining only, cross member, before joining the ambient air, a steam 29 filter placed him also between the lateral wall 23 of the tank and coating 26 of the machine, but higher. The aforementioned steam 29 filter collects the excess of moisture of the hot air. This moisture almost imperceptibly emerges in the pendent ambient air the pause from operation from the dishwasher and the filter steam 29 is thus again ready with the use for the next resuming of program.

#### Claims

1. - Dishwasher provided with a driving back fan of the fresh air which is heated by an appropriate apparatus, to dry the dish after, injected in the tank of the machine and rejected in the ambient air extraction of the steam, characterized dishwasher by the fact that it comprises side of inlet of the air a filter air (17), side of outlet an apparatus of condensation (25) and a steam filter (29).

2. - Dishwasher according to the claim characterized by the fact that the air filter (17) is grouped with the fan (16) below the bottom (15) of the tank while the apparatus of condensation (25) and the steam filter (29) are placed between a lateral wall (23) tank and the-coating (26) of the machine.

3. - Dishwasher according to any of claims 1 or 2 characterized by the fact that the inlet opening (22) and the outlet opening (24) of the air in the tank (11) are placed above the level of the liquid, and about opposite one the other, on the lateral walls (20, 23).